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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/773,093	02/05/2004	Boris Schapiro	F0409	3280
7590 11/17/2004			EXAMINER	
Lawrence G. Fridman, Esq. SILBER & FRIDMAN, ESQS. 66 Mount Prospect Ave. Clifton, NJ 07013			TRIEU, THAI BA	
			ART UNIT	PAPER NUMBER
			3748	

DATE MAILED: 11/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

10/773,093

Applicant(s)

SCHAPIRO ET AL.

Examiner

Thai-Ba Trieu

Art Unit

3748

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-20 is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

The Preliminary Amendment filed on February 05, 2004 is acknowledged.

This application is in condition for allowance except for the following formal matters:

1. THE INFORMATION DISCLOSURE STATEMENT:

The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

2. IN THE ABSTRACT:

Since the Abstract is too long, applicants are required to submit a substitute abstract to meet the requirement set forth below:

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet **within the range of 50 to 150 words**. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be

implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. IN THE SPECIFICATION:

1. On Page 3, line 15, "US patent 3,006,901" does not disclose rotary piston machines having an oval piston in an oval chamber (See attached document). Applicants should review and provide a correct patent number of the reference.

2. On Page 3, line 15, "*havin*" after "*piston machines*" should be replaced by -- **having** -- (for correcting typo error).

3. On Page 12, line 26, "**84, 86, and 88**" after "*inlet valve*" should be replaced by -- **82, 84, and 86** -- (for correcting typo error).

4. On Page 13, line 10, "*rotary piston 106*" should be replaced by -- **rotary piston 60** -- (for correcting typo error).

5. 4. On Page 13, lines 32-33, "*nappe section 66*" should be replaced by -- **circular arc 66** -- (for correcting typo error).

6. Applicants should elect one of the following terms to describe the element "58" through out the specification in order to maintain the consistency of the whole specification:

- a. **axis 58** (See page 15, lines 2 and 18).
- b. **central axis** (See Page 11, line 22).
- c. **center axis 58** (See Page 15, lines 2, 8, 18, 22).

7. On Page 17, line 27, "**combustion cavity 98**" should be replaced by – **combustion cavity 99** -- (for correcting typo error).
8. On Page 17, line 23, "**working chamber 147, 146**" should be replaced by – **working chamber 144, 146** -- (for correcting typo error).
9. On Page 20, line 8, "**Longitudinal grooves 20**" should be replaced by – **Longitudinal grooves 200** -- ; line 9, "**seals 202**" should be replaced by – **seals 120** -- (for correcting typo error).
10. On Page 21, line 1, "**slide valve 208 is centerd**" should be replaced by – **slide valve 210 is centered** --; and line 6, "**respective section 313 or 216**" should be replaced by – **respective section 214 or 216**-- (for correcting typo error).
11. On Page 22, line 7, "**strip 238**" should be replaced by – **strip 232** -- (for correcting typo error).

4. IN THE DRAWINGS:

1. The drawings do not include the following reference sign(s) mentioned in the description: "**172**" (See Page 19, lines 17, 21 and 26); "**186**" (See Page 19, line 22); "**192**" (See Page 19, line 31); "**274**" (See Page 22, line 13). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended.

The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action.

2. The drawings include the following reference character(s) not mentioned in the description: **"305"** (See Figure 2). Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action.

3. Figure 3 needs to be corrected since the depicted number **"352"** is used to describe a chamber formed in a housing 350 (See Page 24, line 30). However, in Figure 3, the number of **"352"** is used to labeled **"a valve"**.

4. The reference characters **"154"** and **"182"** have both been used to designate **"enlarged section"** (See Figure 16); and **"188"** and **"168"** have both been used to designate **"central portion"** (See Figure 16). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action.

5. The reference character **"158"** has been used to designate both **"conical recess"** (See Page 19, lines 10 and 23) and **"shaft"** (See Page 19, lines 13 and 15). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner,

the applicant will be notified and informed of any required corrective action in the next Office action.

5. IN THE CLAIMS:

1. Claim 1, Part (a), line 4, ***“said arcs”*** should be replaced by -- **said circular arcs** – (for consistency).

2. Claim 3, Part (b), lines 2-3, ***“said coupling structures”*** should be replaced by – **said complementary coupling structures** – (for clearly distinguishing between the coupling structures of the rotary piston and the complementary coupling structures).

3. Claim 19, Part (a), line 2, ***“circular arts”*** should be replaced by – **circular arcs** -- (for correcting typo error); and line 4, ***“which arcs change”*** should be replaced by -- **said circular arcs changing** – (for consistency).

4. Pursuant to rule 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Claim **21** has been renumbered as **claim 20**, since claim **20 is omitted**.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Doyer (US Patent Number 3,285,189) discloses a motor, pump, or compressor with a piston rotatable within a housing.

- Winans (US Patent Number 3,301,228) discloses piston displacement motors.

- Dieter (US Patent Number 3,690,791) discloses a rotary engine with radially shiftable rotor.

- Gunthard (US Patent Number 3,799,705) discloses an internal combustion engine with a rotary piston.

- Campbell (US Patent Number 3,967,594) discloses a rotary power unit.

- Gale et al. (US Patent Number 3,996,901) discloses a rotary piston mechanism.

- Gale et al. (US Patent Number 4,111,617) discloses a rotary piston mechanism.

- Jeng (US Patent Number 4,233,003) discloses a rotary pump.

- Barthod et al. (US Patent Number 5,370,508) disclose a positive displacement machine having orbital motion.

- Leroy et al. (US Patent Number 5,380,177) discloses a positive displacement machine with planetary motion and hyper-trochoidal geometry.

- Marx et al. (US Patent Number 5,810,574) discloses a power plant of the rotary piston type.

- Neumann (Patent Number DE 36 33 536 A1) discloses a rotary engine.
- Schapiro et al. (Patent Number DE 199 20 589 C1) disclose a rotary piston internal combustion engine.
- Ito (Patent Number JP 2002-309951 A) discloses a basic structure of composite circle rotary engine.
- Shimura (Patent Number JP 58-138201 A) discloses an elliptical valve rotary engine equipped with triangular cylinder.
- Akasaka (Patent Number JP 10-220238 A) discloses a compressor of an internal combustion engine.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai-Ba Trieu whose telephone number is (703) 308-6450. The examiner can normally be reached on Monday - Thursday (6:30-5:00)

However, the examiner's new telephone number (751) 272-4867 will become effective after the expected changeover date of November 22, 2004.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion can be reached on (703) 308-2623. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TTB
November 15, 2004


Thai-Ba Trieu
Patent Examiner
Art Unit 3748